



# State Revolving Fund Loan Programs

## Drinking Water, Wastewater, Nonpoint Source

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### ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

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#### Allen County Regional Water & Sewer District Sewer Extensions to Two Areas State Revolving Fund Project # WW12 02 02 04

**DATE:** September 25, 2012

**TARGET APPROVAL DATE:** October 25, 2012

#### I. INTRODUCTION

The above entity has applied to the State Revolving (SRF) Fund Loan Program for a loan to finance all or part of the wastewater project described in the accompanying Environmental Assessment (EA). As part of facilities planning requirements, an environmental review has been completed which addresses the project's impacts on the natural and human environment. This review is summarized in the attached EA.

#### II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The SRF has evaluated all pertinent environmental information regarding the proposed project and determined that an Environmental Impact Statement is not necessary. Subject to responses received during the 30-day public comment period, and pursuant to Indiana Code 4-4-11, it is our preliminary finding that the construction and operation of the proposed facilities will result in no significant adverse environmental impact. In the absence of significant comments, the attached EA shall serve as the final environmental document.

#### III. COMMENTS

All interested parties may comment upon the EA/FNSI. Comments must be received at the address below by the target approval date above. Significant comments may prompt a reevaluation of the preliminary FNSI; if appropriate, a new FNSI will be issued for another 30-day public comment period. A final decision to proceed, or not to proceed, with the proposed project shall be effected by finalizing, or not finalizing, the FNSI as appropriate. Comments regarding this document should be sent within 30 days to:

Max Henschen  
Senior Environmental Manager  
State Revolving Fund -- IGCN 1275  
100 N. Senate Ave.  
Indianapolis, IN 46204  
317-232-8623

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## ENVIRONMENTAL ASSESSMENT

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### I. PROJECT IDENTIFICATION

Project Name:	<b>Proposed Sewer Extensions to Two Areas</b> Allen County Regional Water & Sewer District P.O. Box 11888 Fort Wayne, IN 46861-1888
SRF Project Number:	WW12 02 02 04
Authorized Representative:	Ric Zehr, President Board of Trustees

### II. PROJECT LOCATION

Allen County Regional Water & Sewer District (ACRW&SD) is located in Allen County. The ACRW&SD study area is the same as the 20-year service area and includes all of the unincorporated areas within Allen County. The project proposes to install sanitary sewer systems in two project areas (see Figure 2): (1) Greater Cedar Creek Watershed Area in the Cedarville and Hometown USGS quadrangles, Perry Township, T32N, R12E, sections 10, 11, 14, 15, 22, 23, 26, and 27; and (2) Flutter Road – Wheelock Road – Eby Road – Hickory Place Addition Area in the Cedarville USGS quadrangle, St. Joseph Township, T31N, R13E, sections 1, 2, 11 and 12 (see figures 32B and 33B).

### III. PROJECT NEED AND PURPOSE

Due to failing septic systems and more stringent septic system regulations, residents have approached the District regularly to have sewers extended to their areas. The following areas are currently seeking sanitary sewers:

The Greater Cedar Creek Watershed Area has 352 individual on-site septic systems. Twenty-four homeowners had no systems on file with the Fort Wayne – Allen County Department of Health (DOH). Three structures have aerobic treatment units that are over 50 years old. Two-hundred ninety-six structures have a filter bed system; 80 percent were installed prior to 1991. The DOH has documented 24 confirmed failures.

The Flutter Road – Wheelock Road – Eby Road – Hickory Place Addition has 115 individual on-site septic systems. Fifteen homeowners had no systems on file with DOH. One structure has an aerobic treatment unit that is over 50 years old. Seventy-five structures have a filter bed system; 71 percent were installed prior to 1991. The DOH has documented 12 confirmed failures.

The DOH investigated the on-site systems in each of the two proposed service areas. In correspondence dated April 28, 2011, the DOH stated: "...this Department has documentation of failed onsite systems that are creating public health hazards throughout these areas. Further, we recognize public sewer as the best solution to the problems in these areas, and fully support the ACRW&SD in their on-going efforts to eliminate these areas within Allen County that contain non-point source pollutants."

#### IV. PROJECT DESCRIPTION

The District intends to install gravity or low-pressure sanitary sewer collection systems to the two areas described above. The systems will connect with Fort Wayne, and their wastewater will be treated at the city's treatment plant.

A. Greater Cedar Creek Watershed Service Area sanitary sewer system includes installing approximately:

1. 315 feet of 48-inch fiberglass reinforced polymer sanitary sewer;
2. 3,980 feet of 36-inch polyvinyl chloride (PVC) sanitary sewer;
3. 3,155 feet of 24-inch PVC sanitary sewer;
4. 3,700 feet of 18-inch PVC sanitary sewer;
5. 2,015 feet of 12-inch PVC sanitary sewer;
6. 7,225 feet of 8-inch PVC sanitary sewer;
7. 2,375 feet of 8-inch high density polyethylene (HDPE) force main;
8. 2,240 feet of 6-inch PVC service laterals;
9. fifty-four 48-inch diameter manholes;
10. eight 60-inch diameter manholes;
11. five 72-inch diameter manholes;
12. one 84-inch diameter manhole;
13. one 60-inch air release valve manhole;
14. twenty-one air release valve manholes;
15. one submersible lift station on the south side of Gump Road approximately five hundred feet west of the intersection of Gump and Auburn Roads with two pumps rated at 475 gallons per minute (gpm) each;
16. fifty-eight 12- by 6-inch wyes;
17. nine 8- by 6-inch wyes;
18. 22,600 feet of 2-inch pressure sewer main;
19. 10,120 feet of 3-inch pressure sewer main;
20. 8,260 feet of 4-inch pressure sewer main;
21. 47,385 feet of 1 ½ -inch pressure sewer lateral;
22. 270 grinder pumps;
23. 53 terminal and inline flushing cleanouts;
24. five manhole connections; and
25. replacing approximately 370 square yards of asphalt pavement; and
26. repairing approximately 254 square yards of stone driveway;
27. repairing approximately 117 square yards of asphalt driveway;
28. repairing approximately 50 square yards of concrete driveway; and
29. removing approximately 15 trees.

B. Flutter Road – Wheelock Road – Eby Road – Hickory Place Addition Service Area sanitary sewer system includes installing approximately:

1. 7,245 feet of 12-inch PVC sanitary sewer;
2. 10,085 feet of 8-inch PVC sanitary sewer;



3. 5,005 feet of 2-inch pressure sewer;
4. 6,190 feet of 1 ½ -inch of pressure sewer line;
5. 26 grinder pumps;
6. fifty-three 48-inch manholes;
7. one 72-inch manhole;
8. two air release valves;
9. five terminal and inline flushing cleanouts;
10. twenty-five 12-inch by 6-inch wyes;
11. sixty-two 8-inch by 6-inch wyes;
12. 2,725 feet 6-inch service lateral;
13. replacing approximately 290 square yards of asphalt;
14. replacing approximately 50 square yards of concrete pavement;
15. repairing approximately 270 square yards of stone driveway;
16. repairing approximately 80 square yards of asphalt driveway;
17. repairing approximately 100 square yards of concrete driveway;
18. removing approximately 14 trees; and
19. making improvements to the Foxwood Lift Station by replacing the pumps with new pumps rated at 490 gpm and replacing the controls with new ones.

The preliminary design flows for the two new service areas are:

- (1) Greater Cedar Creek Watershed Service Area --estimated average design flow of 109,120 gallons per day (gpd) and an estimated peak flow of 436,480;
- (2) Flutter Road – Wheelock Road – Eby Road – Hickory Place Addition Service Area -- estimated average design flow of 35,650 gpd and an estimated peak flow of 142,600 gpd.

The organic loadings associated from each project area are assumed to be approximately:  
 5 day Carbonaceous Biochemical Oxygen Demand (CBOD<sub>5</sub>)--200 milligrams per liter (mg/l);  
 Total Suspended Solids (TSS)--200 mg/l; and Ammonia-Nitrogen (NH<sub>3</sub>-N)--20 mg/l.

## V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

### A. Selected Plan Estimated Cost Summary

<u>Project Areas</u>	<u>Estimated Cost</u>
1. Greater Cedar Creek Watershed Area	\$6,600,000
2. Flutter Road – Wheelock Road	<u>1,717,500</u>
Subtotal Construction Cost	\$8,317,500
Contingency	<u>415,875</u>
Total Estimated Construction Cost	\$ 8,733,375
 Total Non-Construction Cost	 \$ <u>991,625</u>
 <b>Total Estimated Project Cost</b>	 <b>\$ 9,725,000</b>

- B. ACRW&SD will borrow approximately \$7,825,000 from the State Revolving Fund (SRF) Loan Program for a 20-year term at a fixed interest rate to be determined at loan closing. Fort Wayne will pay approximately \$1,900,000 to the ACRW&SD for oversizing a portion of the collection system in Greater Cedar Creek Watershed Service Area for future growth.



As part of an interlocal agreement that has not been finalized as of this date, the flow from the two areas will be treated at the Fort Wayne wastewater treatment plant and rates will be established. The SRF will not close the loan with the District until the interlocal agreement between the District and Fort Wayne is executed and submitted to the SRF.

## **VI. DESCRIPTION OF EVALUATED ALTERNATIVES**

The No-Action alternative was eliminated from consideration for both project areas, since failing on-site septic systems would continue to discharge inadequately treated sewage into nearby streams or ditches and cause a potential public health problem.

In addition to the "No Action" alternative, the District evaluated gravity sewers, low pressure grinder pumps and a combination of both.

Greater Cedar Creek Watershed Service Area: A combination of a primarily low pressure grinder pump sewer system, coupled with a gravity sewer system and a new lift station was the only collection system alternative evaluated for this area.

Flutter Road – Wheelock Road – Eby Road – Hickory Place Addition Service Area: A combination of a primarily gravity sewer system, coupled with a low pressure grinder pump sewer system and an upgraded lift station was the only collection system alternative evaluated for this area.

## **VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES**

### **A. Direct Impacts of Construction and Operation**

Disturbed and Undisturbed Areas: The District implemented an archaeological survey on project areas that might not have been significantly disturbed by previous construction activity. The survey did not find significant archaeological resources. Most of each project will be constructed within previously disturbed road rights-of-way or utility corridors. The District will follow the Belot Drain/Ely Run to install some of the gravity sewers in the Greater Cedar Creek Watershed area. The District has solicited easements from property owners along the east side of Auburn Road and the east side of Wheelock Road to facilitate construction. The pressure sewer collection system and the pressure service laterals will be installed via directional drilling to minimize impacts in these areas. Construction corridors away from disturbed areas next to roads will be no greater than 85 feet and no less than 45 feet.

Structural Resources (Figures 32B and 33B): In several areas, the proposed sanitary sewers will be located close to a historic structure:

In the Flutter Road – Wheelock Road area, the proposed gravity sewer on Flutter Road will be close or adjacent to the property lines of the Christian Schaick Farm, Site #003-104-35001, 9760 Flutter Road, and the Gilleron-Schafter Farm, 003-104-35003, 9124 Flutter Road. The proposed sanitary sewers near these historic structures will be sited in the road right-of-way previously disturbed by utility installation.

In the Greater Cedar Creek Watershed Area, the proposed force main portions of the project will be adjacent to or near the George W. Ott Farm, Site #003-104-15034, 2022 Cedar Canyon Road, and the George Gump Farm, Site #003-104-15064, 1605 Gump Road. The proposed gravity sewer portions of the project will be adjacent to the George Gump Farm, Site #003-104-15064, 1605 Gump Road; the Martin Farm, Site #003-104-15078, 14307 Auburn Road;

the Ott Farm, Site #003-104-15079, 14004 Auburn Road; the James McComb Farm, Site #003-104-15080, 13712 Auburn Road, and the Jerome D. Gloyd Farm, Site #003-104-15089, 13130 Auburn Road. All of the proposed sewers near those historic structures will be constructed within the previously disturbed road right-of-way with the exception of the George Gump Farm--the proposed gravity sewer near this site will be extended cross-country from the end of Windover Trail to the north to eliminate the Canyon Run lift station.

Construction and operation of the project will not alter, demolish or remove historic properties. If any visual or audible impacts to historic properties occur, they will be temporary and will not alter the characteristics that qualify such properties for inclusion in or eligibility for the Natural Register of Historic Places. The SRF's finding pursuant to Section 106 of the National Historic Preservation Act is: "no historic properties affected."

Plants and Animals: The construction and operation of the sanitary sewer projects will not negatively impact state or federally listed endangered species or their habitat. Selected tree removal is scheduled to occur as part of this project primarily along the sewer route that will follow the Belot Drain. Also, some tree removal is scheduled to occur in the forested wetland area along Auburn Road south of the intersection with Hursh Road. In addition, several trees will need to be removed in the Flutter Road- Wheelock Road project area along the east side of Wheelock Road.

Prime Farmland: Neither of the two projects will cause a conversion of prime farmland.

Wetlands (Figures 32D and 33D): One area in question was located immediately south of the existing Canyon Run lift station. However, based on results of the District's Wetlands Assessment, this area has a corridor of non-wetlands that was originally proposed to be used as a utility corridor for the construction of the originally proposed gravity sewer. The proposed route for the new 4-inch force main will be traversing the area of the wetlands south of the Canyon Run lift station; however, all of the pressure sewers will be directionally drilled in this area to mitigate any adverse environmental impacts. There is only one wetland that will be impacted which is located in the Greater Cedar Creek area. The Wetlands Assessment conducted by the District identified a forested wetlands area on the east side of Auburn Road immediately south of its intersection with Hursh Road. The District conducted a Wetlands Assessment for the proposed project areas and delineated selected wetlands in close proximity to the sewers. The District also solicited the Army Corp of Engineers for a permit as it relates to wetlands in the same areas. The District received a Section 401 clearance from the Indiana Department of Environmental Management for wetland work.

100-Year Floodplain: Portions of sewer in the Greater Cedar Creek area located in the Belot Drain and the Flutter Road – Wheelock Road area located on Wheelock Road between Flutter Road and Eby Road will be in the 100-year floodplain; the lines will be underground and will not displace floodwaters.

Surface Waters: The proposed projects will not affect Natural, Scenic and Recreational Rivers and Streams, Exceptional Use Streams, or Outstanding State Resource Waters. In areas where pressure sewers will be installed, the streams will be directionally drilled. Other areas where the gravity sewers will be installed the open cut method will be done immediately adjacent to the roadway pavement in an area previously disturbed by construction of the roadway.

Groundwater: The proposed projects will not impact groundwater. The installation of the proposed sewers may require dewatering during excavation of sewer trenches and grinder pumps. All of the homes in these two areas are serviced by individual potable drinking water wells.



Air Quality: The proposed projects will not adversely affect air quality, other than temporary impacts due to dust and emission.

Open Space and Recreational Opportunities: The proposed project's construction will neither create nor destroy open space and/or recreational opportunities.

National Natural Landmarks: The construction and operation of the proposed projects will not impact National Natural Landmarks.

The project will not affect the Lake Michigan Coastal Management Zone.

#### **B. Indirect Impacts**

The District's Preliminary Engineering Report (PER) states: *The proposed sanitary sewer system projects will allow the District to provide sewer service to two new regions outside of established municipal service areas. The new sanitary sewage systems will eliminate failing, on-site septic systems and provide users with municipal sanitary sewer service. It is unknown whether or not these sanitary sewer systems will create or attract new development. It is dependent more so on the location of the service area and the availability of undeveloped land adjacent to the sewers within the new service area. The District will ensure, through the authority of its Board and local zoning laws, that future development will not adversely impact environmental sensitive areas by enforcing the requirements and guidelines of the IDNR, U.S. Fish & Wildlife Service, IDEM, and the Allen County Drainage Board.*

#### **C. Comments from Environmental Review Authorities**

The Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA), in correspondence dated December 14, 2011, stated: *Pursuant to IC 13-18-21 and 327 IAC 14 and Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the Indiana State Historic Preservation Officer ("Indiana SHPO") is conducting an analysis of the materials dated and received by the Indiana SHPO on November 21, 2011, for the above indicated project in Perry and St. Joseph Townships, Allen County, Indiana.*

*Based on our analysis, it has been determined that no historic structures will be altered, demolished, or removed by the proposed project.*

*In regard to archaeology, we have not identified any currently known archaeological resources listed in or eligible for the National Register of Historic Places within the areas which were archaeologically surveyed (Stillwell, 7/5/11). However, ... it appears that there are portions of the proposed project area which were not archaeologically addressed. If there are remaining portions of the proposed project which have not been previously disturbed, or archaeologically surveyed, then a reconnaissance level archaeological survey of those areas will be required to determine the presence or absence of archaeological resources.*

Accordingly, the District implemented another archaeological survey, which the SRF submitted to the DHPA for review. In correspondence dated August 14, 2012, the DHPA stated: *Pursuant to IC 13-18-21 and 327 IAC 14 and Section 106 of the National Historic Preservation Act (16 U.S.C. §470f) and 36 C.F.R. Part 800, the Indiana State Historic Preservation Officer ("Indiana SHPO") is conducting an analysis of the materials dated and received by the Indiana SHPO on July 24, 2012, for the above indicated project in Perry and St. Joseph Townships, Allen County, Indiana.*



*Based on our analysis, it has been determined that no historic structures will be altered, demolished, or removed by the proposed project. In addition, it has been determined that no currently known archaeological resources listed in or eligible for the National Register of Historic Places will be altered, demolished, or removed by the proposed project.*

*If any archaeological artifacts, features, or human remains are uncovered during construction, state law (Indiana Code 14-21-1-27 & 29) requires that the discovery must be reported to the Department of Natural Resources within two business days.*

*The U.S. Fish and Wildlife Service, in correspondence dated September 19, 2012, stated: These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U.S. Fish and Wildlife Service's Mitigation Policy.*

*The proposed Cedar Creek Watershed portion of the project consists of the construction of new force mains and new gravity sanitary sewers in an area associated with Auburn Road, Cedar Canyons Road, and Gump Road, with the force mains serving a number of residential areas and the gravity sewers serving as the main collection sewers to eventually transport the sewage south down Auburn Road and east along Belot Drain to an existing 48-inch sanitary sewer at Union Chapel Road. The Flutter-Wheelock Road portion of the project primarily consists of new gravity sanitary sewers, with a small amount of new force mains, along Notestine, Eby, and Flutter Roads, with the connection along Wheelock Road to an existing lift station just north of Douglas Road.*

*We do not have concerns about the Flutter-Wheelock Road portion of the project because of limited adverse environmental impacts. This project will largely serve individual homes rather than subdivisions because the subdivisions on the south side of the project area are already served by existing gravity sanitary sewers in the Douglas Road area. The sewers will follow existing roadway rights-of-way, where few trees are found, and will make 2 open-cut crossings of Revert Ditch, which is a sparsely wooded agricultural drain.*

*The Greater Cedar Creek Watershed sewer project will place force mains varying from 2- to 8-inch diameter and gravity sewers varying from 8- to 36-inch diameter. The gravity sewer along Auburn Road will begin as an 18-inch pipe at Hursh Road, changing to a 24-inch pipe near Pion Road, and become a 36-inch pipe along Belot Drain. Our concerns for this portion of the project center on impacts to woodlands and wetlands, including those along Belot Drain.*

*When we were first contacted about this proposed project in November 2011, there was a proposal for a new sewer through forested wetlands north of Gump Road. At that time, the plan was to construct a 15-inch gravity sewer using the open-cut method, but it is now proposed to horizontally directionally drill (HDD) a 4-inch force main between an existing pump station at Canyon Run and a subdivision to the south along Windover Trail; an existing grassed right-of-way will be utilized and no wetlands will be impacted. The woodlands and wetlands that would have been impacted by the original gravity sewer proposal are now owned by the Fort Wayne Parks Department, so avoidance of this area is commendable.*

*Another area of concern is an apparently isolated forested wetland along the east side of Auburn Road south of Hursh Road; the 18-inch gravity sewer would be constructed through this wetland adjacent to the Auburn Road right-of-way. There are several very large oaks, either swamp white or bur, in this area; therefore, during the site review we requested that the right-of-way be kept as narrow as possible and that the excavated soils be taken to a nearby field to the north rather than sidecast into the wetland, which would require additional clearing for a temporary work space.*



*The trees should be clearly marked so that the contractor is aware that they are to be left in place, although it appeared that at least 1 could not be avoided. Any temporary work space here needs to be replanted with suitable native trees at the completion of the project.*

*The section of sewer along Belot Drain presents the greatest environmental concern. Originally, in November 2011, it was proposed that the sewer would be constructed on the south side of the stream, but the FWS requested that it be moved to the north side, which is kept cleared of trees for a width of about 30 – 40 feet as maintenance access along this Legal County Drain. The sewer will now be constructed along the north side of Belot Drain, utilizing the cleared drainage easement to the extent possible. However, at the site meeting we were informed that because this is a gravity sewer, and because of elevations, the pipe needs to be constructed through a portion of the woodland north of the stream and west of I-69.*

*The group walked the proposed route as much as possible, but there were no centerline stakes so the exact location could not be determined for a portion of the route. Beginning at Auburn Road, the proposed 36-inch sewer would be constructed within the cleared drainage easement along the north side of Belot Drain for about 1325 feet, where it would turn east and pass through a grass field/pasture (Photograph No. 1), avoiding the wooded fencerow to the south. It will follow the south side of this field for about 600 feet before entering a woodland that is present along the north side of Belot Drain outside of the cleared drainage easement. The sewer will extend through about 700 feet of this woodland before going under I-69 (Photographs No. 2 and No. 3). There are several small wetlands within this woodland and elsewhere in the vicinity of Belot Drain, but the proposed pipeline route will avoid most of them. There is also a small eroding lateral ditch which will be crossed (Photograph No. 4) and will require restoration and erosion control.*

*It is apparent that some large, mature white oaks and red oaks will be taken, as will large sugar maple, American basswood, and eastern cottonwood. Other tree species in the woodland include black walnut, black cherry, red elm, pawpaw, and ashes dying due to the emerald ash borer. At the site visit we requested that the tree clearing be limited to that necessary to construct the pipe and that the excavated soils be stockpiled in openings among the trees and/or in portions of the woodland where the trees are much younger; the soils could also be placed within the existing cleared drainage easement as long as they are sufficiently enclosed to prevent erosion into Belot Drain. Apparently an area about 40 feet wide will need to be cleared because of the amount of space needed to dig a trench to the required depth (about 15 feet deep on a very low slope) and width to place a 3-foot diameter pipe. It was indicated that trees can be replanted within the disturbed area except for a strip about 4 or 5 feet wide directly over the top of the pipeline. We request that replanting such species as red oak, white oak, black walnut, sugar maple, and American basswood be required [as] mitigation for project-caused impacts to this woodland.*

*The jack-and-bore construction method will [be] used to place the pipe under I-69. East of I-69 the pipe will cross Belot Drain from north to south using the open-cut construction method, which involves damming the stream and fluming the water across the trench, and will continue east and south parallel to the stream to an existing manhole at a 48-inch sanitary sewer about 400 feet north of Union Chapel Road. Except for a few scattered trees along Belot Drain, the area east of I-69 is open grass/herbaceous vegetation along the stream and a crop field and buildings elsewhere, so we do not have concerns about project impacts in this area.*

*In conclusion, although we have concerns about the loss of mature trees within the woodland north of Belot Drain, we recognize the need for this project because the area that will be serviced by the new sanitary sewer system has major pollution issues related to unsuitable soils and failed or failing individual septic systems at the numerous residences present here. As long as tree clearing is limited to the minimum necessary to lay the pipe, a temporary work space to store the*



soils is not cleared within the woodland, and native trees are replanted in the disturbed area, except for a strip directly over the pipeline, the U.S. Fish and Wildlife Service does not object to the construction of this proposed sanitary sewer.

#### ENDANGERED SPECIES

The proposed project is within the range of the Federally endangered Indiana bat (Myotis sodalis) and rayed bean mussel (Villosa fabalis) and the candidate eastern massasauga rattlesnake (Sistrurus catenatus catenatus). There is no known habitat for these species within the proposed project area; therefore we concur with your determination that the proposed project is not likely to adversely affect these endangered and candidate species.

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act of 1973, as amended. However, should new information arise pertaining to project plans or a revised species list be published, it will be necessary for the Federal agency to reinitiate consultation.

In correspondence dated March 10, 2011, the Natural Resources Conservation Service stated: The project to construct new sanitary collection sewers, pump stations, grinder pump stations and transmission mains in the City of Fort Wayne [sic], Allen County, Indiana...will not cause a conversion of prime farmland.

The IDNR Environmental Unit, in correspondence dated September 21, 2012, stated:

County/Site info:

Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969. If our agency has regulatory jurisdiction over the project, the recommendations contained in this letter may become requirements of any permit issued. If we do not have permitting authority, all recommendations are voluntary.

Regulatory Assessment:

Any proposal to construct, excavate, or fill in or on the floodway of a stream or other flowing waterbody which has a drainage area greater than one square mile may require the formal approval of our agency pursuant to the Flood Control Act (IC 14-28-1), unless it qualifies for a general license under Administrative Rule 312 IAC 10-5 that applies to utility line crossings. Please submit more detailed plans to the Division of Water's Technical Services Section if you are unsure whether or not a permit will be required. Also, please include a copy of this letter with any permit application(s), if required.

Natural Heritage Database:

The Natural Heritage Program's data have been checked. The significant natural areas and species below have been documented within ½ mile of the Great Cedar Creek Watershed Area project. All are within Township 32 North, Range 12 East and are listed below according to the section in which they were documented. The Division of Nature Preserves recommends that precautions be taken to keep the project footprint within the existing easements along the roads. This will eliminate any impacts to the nature preserves, communities, plants, and invertebrates near the project. For those natural areas with a boundary adjacent to the proposed project,



special care should be taken to avoid parking or spoil piles in these areas.

1) Section 10

- A) STATE SIGNIFICANT COMMUNITY: *Wet-mesic Floodplain Forest*; within the project
- B) NATURE PRESERVES:
  - 1) Rodenbeck (Albert D.) Nature Preserve; north of the project
  - 2) Dustin Nature Preserve; north of the project
- C) PLANTS:
  - 1) *Shining Ladies'-tresses (Spiranthes lucida)* – state rare; within the project
  - 2) *Rose Turtlehead (Chelone oblique var. speciosa)* – watch list; with the project
- D) MUSSEL: *Kidneyshell (Ptychobranhus fasciolaris)* – special concern; Cedar Creek
- E) ANIMALS:
  - 1) *Bobcat (Lynx rufus)* – special concern; within the project
  - 2) *Red-shouldered Hawk (Buteo lineatus)* – special concern; NW of the project

2) Section 11

- A) STATE SIGNIFICANT COMMUNITIES: *Wet-mesic Floodplain Forest*; NE of the project
- B) PLANT: *Mountain Phlox (Phlox ovata)* – state endangered; northeast of the project
- C) INSECT: *Gray Petaltail (Tachopteryx thoreyi)* – state rare; within the project
- D) MUSSEL: *Kidneyshell (Ptychobranhus fasciolaris)* – special concern; Cedar Creek

3) Section 14

- A) STATE SIGNIFICANT COMMUNITIES:
  - 1) *Mesic Upland Forest*; with the project
  - 2) *Wet-mesic Floodplain Forest*; northeast of the project
- B) NATURE PRESERVES:
  - 1) Rodenbeck (Albert D.) Nature Preserve; north of the project
  - 2) Vandolah Nature Preserve; east of the project
- C) INSECT: *Gray Petaltail (Tachopteryx thoreyi)* – state rare; within the project
- D) MUSSEL: *Kidneyshell (Ptychobranhus fasciolaris)* – special concern; Cedar Creek

*Fish & Wildlife Comments: Avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, and compensate for impacts. We recommend that a mitigation, bank stabilization, revegetation, and/or monitoring plan be developed and submitted with the Construction in a Floodway permit application, if required. The following are*

*recommendations that address potential impacts identified in the proposed project area:*

*1) Listed Species:*

- A) Kidneyshell: This mussel species is no longer found live in Cedar Creek; therefore, we do not foresee any impacts to this species as a result of the project.*
- B) Red-shouldered hawk: This bird species is not a very common nester in this part of the state; therefore, we do not foresee any impacts to this species as a result of the project.*
- C) Bobcat: This mammal is highly mobile and generally avoids disturbance; therefore, we do not foresee any impacts to this species as a result of the project:*

*2) Bank Stabilization: Establishing vegetation along the banks is critical for stabilization and erosion control. In addition to vegetation, some other form of bank stabilization may be needed. While hard armoring alone (e.g. riprap or glacial stone) may be needed in certain instances, soft armoring and bioengineering techniques should be considered first. In many instances, one or more methods are necessary to increase the likelihood of vegetation establishment. Combining vegetation with most bank stabilization methods can provide additional bank protection while not compromising the benefits to fish and wildlife. Information about bioengineering techniques can be found at <http://www.in.gov/legislative/iac/20120404-IR--312120154NRA.xml.pdf>. Also, the engineering techniques for streambank stabilization: <http://directives.sc.egov.usda.gov/17553.wba>. (Choose handbooks; Title 210 Engineering; National Engineering Handbook; Part 650 Engineering Field Handbook. Choose Chapter 16 from next window).*

*Riprap should not be placed in the active thalweg channel or placed in the streambed in a manner that precludes fish or aquatic organism passage (riprap should not be placed above the existing streambed elevation). Riprap may be used only at the toe of the side slopes up to the ordinary high water mark (OHWM). The banks above the OHWM should be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to Northern Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion. Stream bank slopes after project completion should be restored to stable-slope steepness (not steeper than 2:1).*

*3) Riparian Habitat/Corridors: Wooded riparian corridors are significant habitat features used by wildlife for travel between larger habitat areas or through congested urban areas. Wooded riparian*



*corridors also provide essential habitat for fish and wildlife by reducing stream temperatures and contributing to woody debris and leaf litter in the stream for cover. Riparian habitat corridors are limited, irreplaceable resources that are often the last, good foothold for many native plant and animal communities. Construction within riparian corridors can have several impacts on fish, wildlife, and botanical resources, including: mortality from construction activities, mortality from maintenance activities or collision with vehicles, modification of animal behavior, alteration and fragmentation of the physical environment, alteration of the chemical environment, spread of exotic plant species, and increased human use and disturbance of these areas. The evidence from well-designed studies suggests that well-connected riparian habitat corridors are valuable conservation areas for fish, wildlife, and botanical resources.*

*In a highly developed and urbanized area, small patches of undeveloped land become the last remaining areas of useable habitat for local and migratory species. Focusing development on previously disturbed areas (such as agricultural areas, vacant properties, etc.) can help preserve undisturbed areas as habitat for wildlife resources. For more information on wildlife habitat conservation, visit the Wildlife Habitat Council's (WHC) website at [www.wildlifehc.org](http://www.wildlifehc.org). The WHC works to increase the amount of quality wildlife habitat on corporate, private and public lands.*

*Impacts that remove trees from a non-wetland, riparian area should be mitigated. Impacts to non-wetland forest over one (1) acre should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, 1-2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees).*

*A native riparian forest mitigation plan should use at least 5 canopy trees and 5 understory trees or shrubs selected from the Woody Riparian Vegetation list (copy enclosed) or an approved equal. A native riparian forest mitigation plan for impacts of less than one acre in an urban area may involve fewer numbers of species and sizes of trees, depending on the level of impact. Additionally, a native herbaceous seed mixture should be planted consisting of at least 10 species of grasses, sedges, and wildflowers selected from the Herbaceous Riparian Vegetation list (copy enclosed) or an approved equal. The DNR's Floodway Habitat Mitigation guidelines can be found online at: <http://www.in.gov/legislative/iac/20120801-IR-312120434 NRA.sml.pdf>.*



4) *Directional Boring:* The plans submitted show 12 proposed stream crossings, including five (5) that will utilize the open-cut method (as shown on Figures 32D & 33D). Belot and Revert Drains are proposed to be crossed via open-cut. These two (2) streams have limited riparian habitat and the areas that are forested along the streams provide many benefits to the stream systems.

*We recommend that all creek or stream crossings be done using a trenchless method, when possible. If the open-trench method is necessary and the only feasible option at any of the planned stream crossings due to the site conditions, the sewer line should be installed as quickly as possible to avoid silt and sediment loading of the stream. The line should then be covered with graded stone and riprap to prevent erosion of the streambed in the vicinity of the crossing. Drilling pits should have erosion controls such as silt fence or other appropriate devices such that drilling mud does not leave the immediate area of the pit or enter the stream.*

5) *Wetlands:* Due to the presence or potential presence of wetlands on site, we recommend contacting and coordinating with the Indiana Department of Environmental Management (IDEM) 401 program and also the US Army Corps of Engineers (USACE) 404 program. Impacts to wetlands should be mitigated at the appropriate ratio (see mitigation guidelines above).

6) *Exposed Soil:* All exposed soil areas should be stabilized with temporary or permanent vegetation by November 1. Between November 1 and April 1, all exposed soils idle for longer than 7 days should be stabilized with erosion control blankets or with a bonded fiber matrix hydro-mulch. Sites should be protected from seasonal flooding by keeping traffic areas covered with stone and soil stockpiles seeded, stable and contained with silt fencing.

*The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:*

1. *Revegetate all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue), legumes, and native shrub and hardwood tree species as soon as possible upon completion.*
2. *Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.*
3. *Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.*
4. *Do not cut any trees suitable for Indiana bat roosting (greater than 3 inches dbh, living or dead, with loose hanging bark) from April 1 through September 30.*
5. *Do not construct any temporary runarounds, causeways, or cofferdams.*
6. *Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.*

7. *Do not use broken concrete as riprap.*
8. *Minimize the movement of resuspended bottom sediment from the immediate project area.*
9. *Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.*
10. *Seed and protect all disturbed streambanks and slopes that are 3:1 or steeper with erosion control blankets (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.*
11. *Inspect structural erosion and sediment control practices daily and repair as necessary until all construction is complete and disturbed areas are permanently stabilized.*

## VIII. MITIGATION MEASURES

The District's PER lists the following mitigation measures:

*The project areas will comply with IDEM's Rule 5 requirements with respect to the mitigation of soil erosion and a detailed plan will be submitted for approval with the completed construction plans and specifications. Mitigation measures cited in typical comment letters from the Indiana Department of Environmental Management concerning the use of straw bale barriers, silt fencing or earthen berms to prevent soil erosion will be incorporated into the erosion control plans and specifications and implemented during construction.*

*Mitigation measures to lessen impacts to wetlands during construction typically cited in comment letters from the Indiana Department of Environmental Management, the Indiana Department of Natural Resources and the U.S. Fish & wildlife Service will be implemented.*

*Exhausts of construction equipment will be required to have mufflers for noise and air pollution abatement.*

*All bare and disturbed areas will be revegetated with a mixture of grasses and legumes upon completion of construction.*

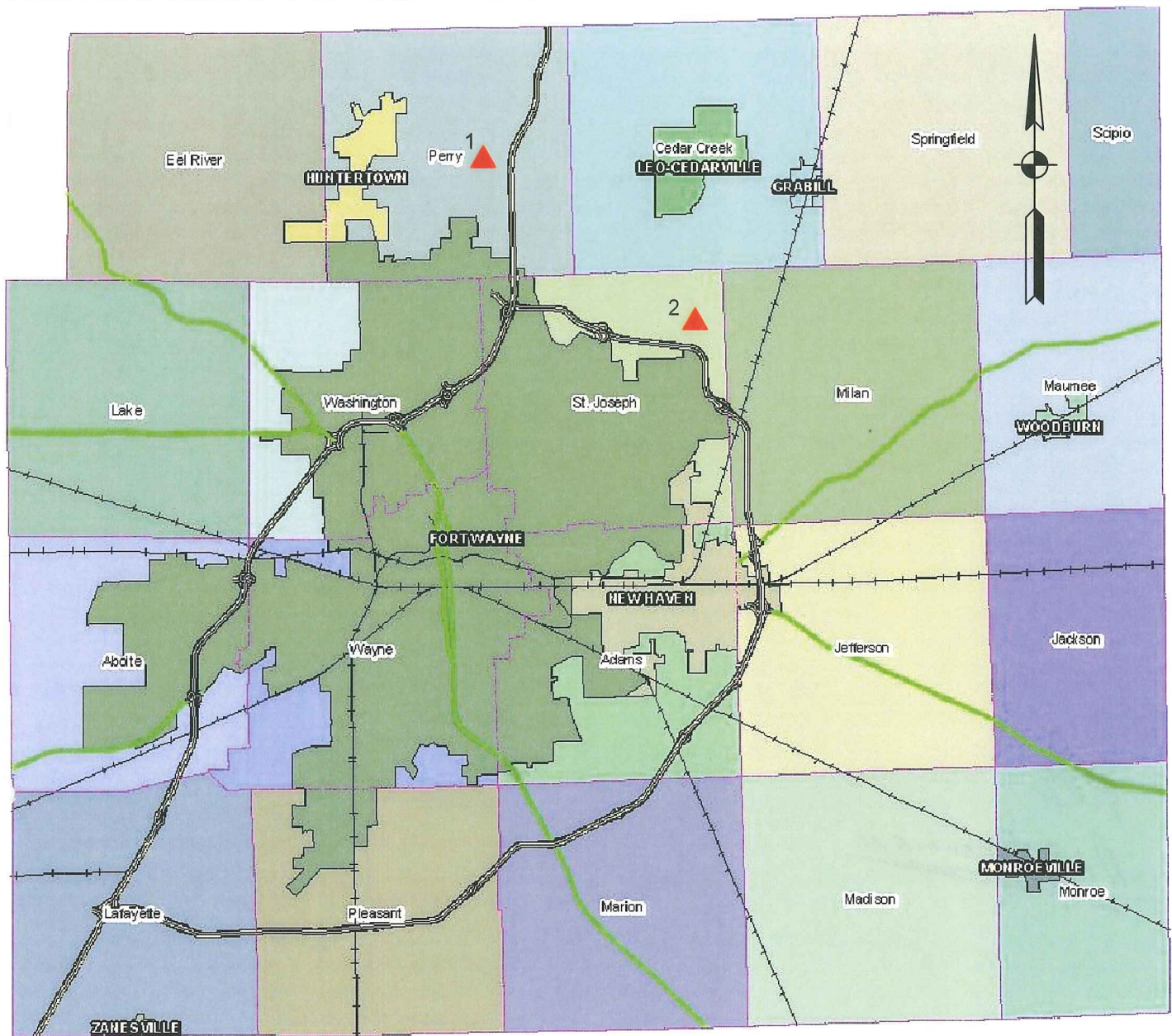
*To minimize non-conformance with 326 IAC 6-4, "Fugitive Dust Emissions", reasonable and proper construction techniques and clean-up practices will be provided. In addition, wetting, sweeping streets and/or chemical stabilizers (calcium chloride) will be used to control dust generated during all phases of the proposed projects. Open burning of construction debris will not be permitted.*

*Mitigation measures typically cited in comment letters from the Indiana Department of Environmental Management, the Indiana Department of Natural Resources and the U.S. Fish and Wildlife Service will be implemented.*

## **IX. PUBLIC PARTICIPATION**

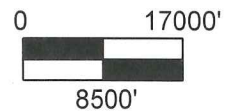
A properly publicized public hearing was held at 12:00 p.m., on June 6, 2011, at the Commissioner's Courtroom Room 200 located in the Fort Wayne City-County Building. There were no questions raised during the hearing and the city received no written comments in the ten day post-hearing period.





#### LOCATIONS

- 1 - GREATER CEDAR CREEK WATERSHED SERVICE AREA
- 2 - FLUTTER ROAD - WHELOCK ROAD - EBY ROAD -  
HICKORY PLACE ADDITION



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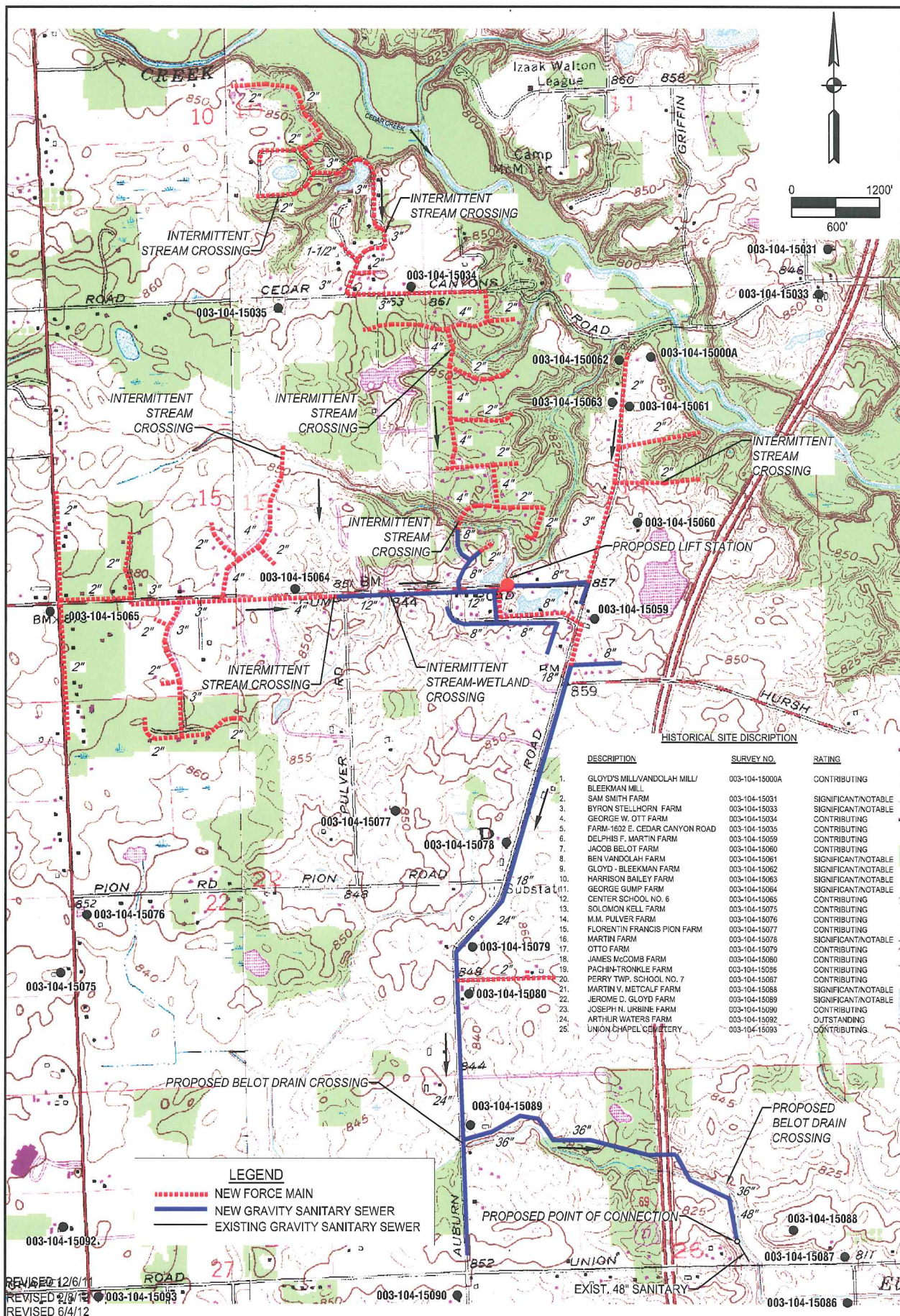
ACRWS - PRELIMINARY ENGINEERING REPORT  
SANITARY SEWER SYSTEM IMPROVEMENTS

FIGURE 2 - GENERAL PROPOSED DISTRICT  
SERVICE AREAS - ALLEN COUNTY

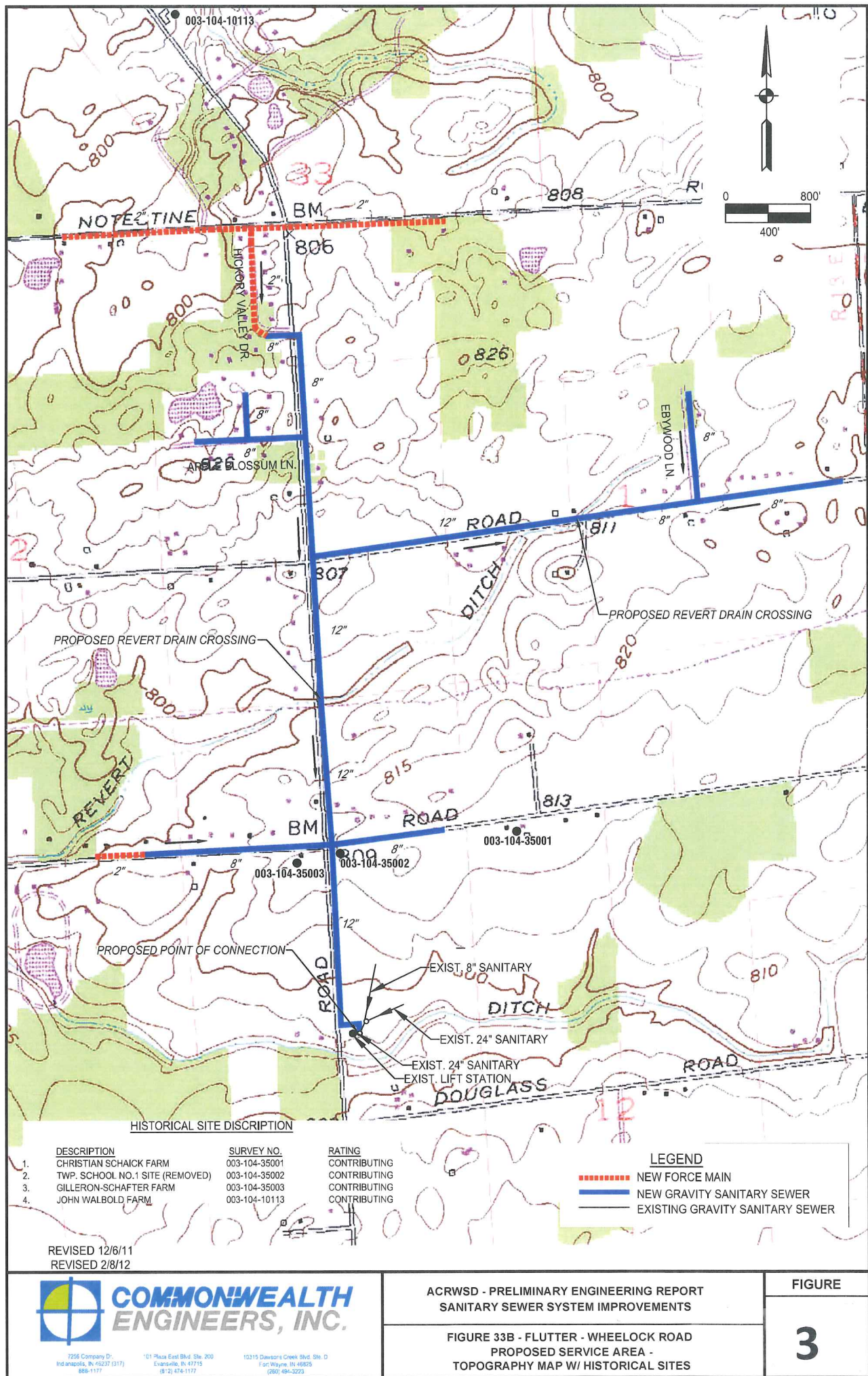
FIGURE

1

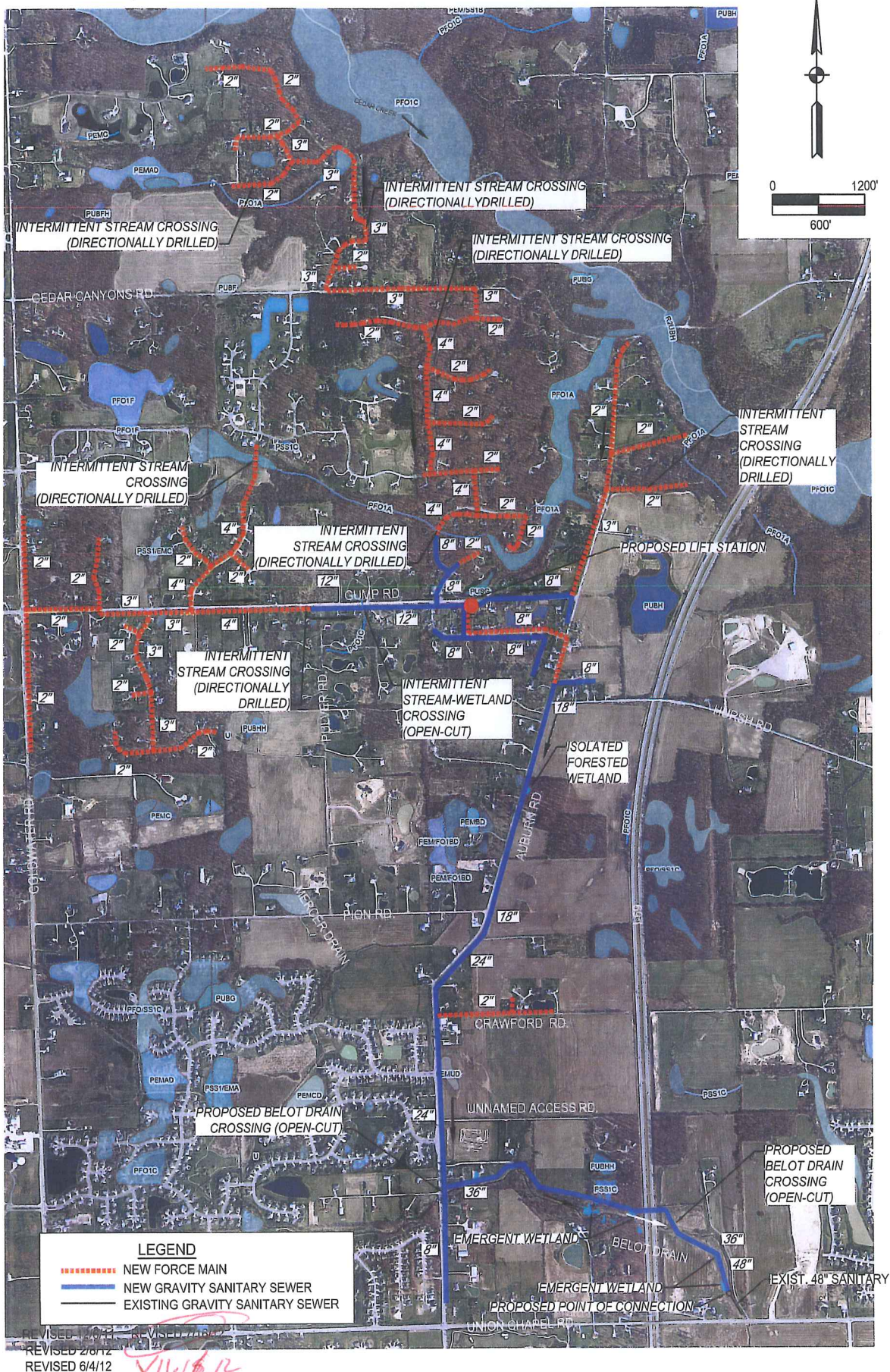




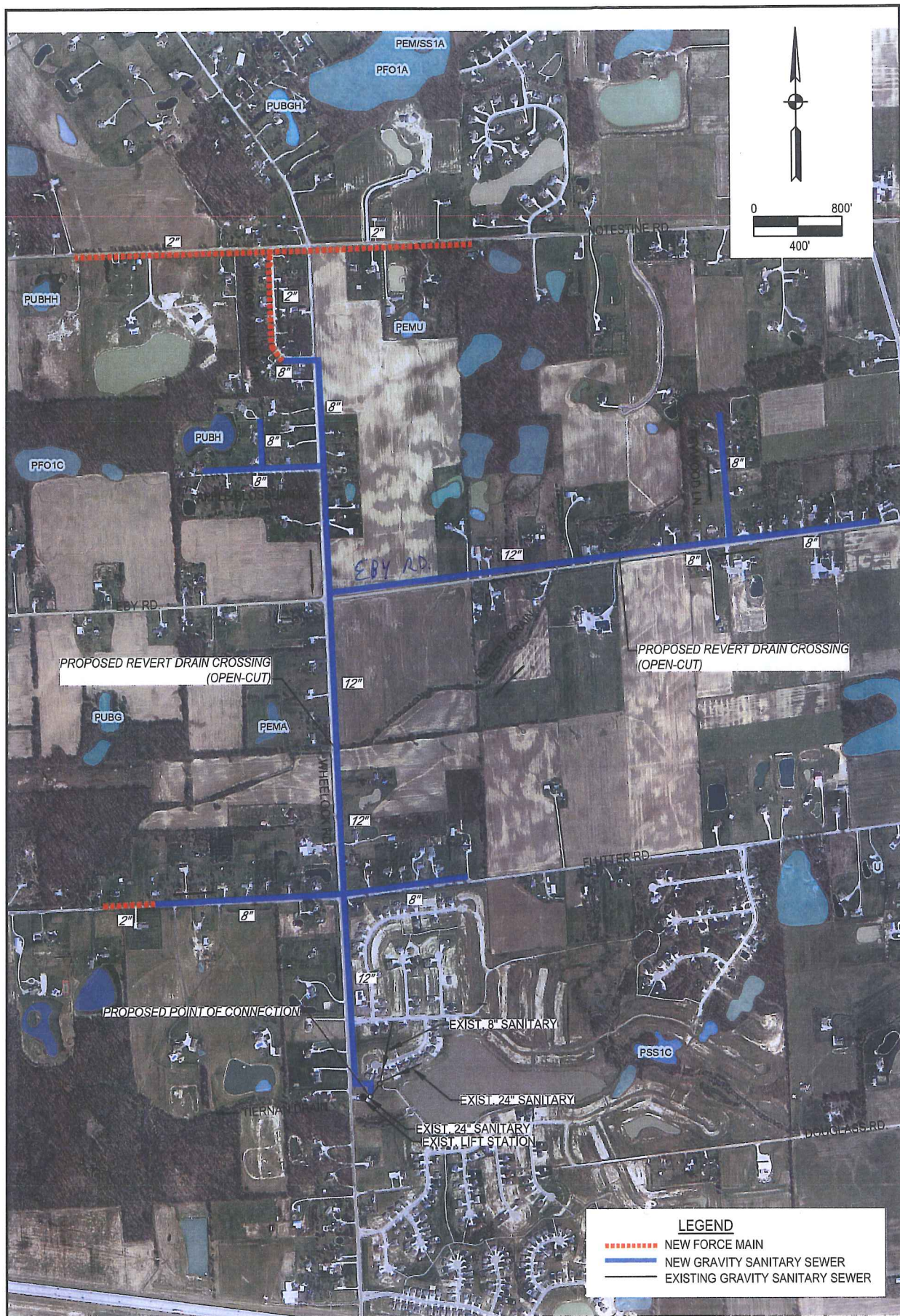












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FIGURE 33D - FLUTTER - WHEELLOCK ROAD  
PROPOSED SERVICE AREA - WETLANDS MAP

FIGURE

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